

USPTO Customer No. 25280

Case 5072

**REMARKS**

Claims 1-51 were pending in this application. Claims 1-17 and 35-51 have been withdrawn pursuant to a restriction requirement. Claim 26 was previously cancelled. Claim 52 has been added. Thus Claims 18-25 and 27-34 are subject to continued examination.

**Rejection under 35 USC §112, first paragraph**

Claims 18-34 have been rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement.

Applicants have amended Claim 18 to remove the term "paperless."

However, Applicant has added the limitation in new Claim 52. Applicants believe there is support for the term "paperless" in the specification, and such support will be described herein.

MPEP 2163.02 states the following:

"The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon 'reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter'. *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983))."

USPTO Customer No. 25280

Case 5072

Applicants believe that the present disclosure supports the use of the term "paperless." MPEP 2163.02 further states "an applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the invention. *Lockwood v. American Airlines, Inc.* 107 F. 3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997)." Applicants have fulfilled this requirement by the words used in the specification and the figures submitted with the application as originally filed, as will be described below.

Specifically, the second paragraph of page 1 (lines 7-14) describes the various disadvantages associated with the use of paper as a component of a wallboard (i.e., flammability, tendency to peel when wet, and lack of strength when wet). Further, on page 2, lines 12 *et seq.*, the specification states that "it would be desirable to provide a composite facing material that could be used in place of paper and other facing products to provide a wallboard with superior strength, fire resistance, and water resistance at a reasonable cost."

The figures (and the description of the figures on page 4) indicate that the wallboard comprises a gypsum core sandwiched between two layers of composite material, the composite material being made of a nonwoven mat and a reinforcement scrim fabric layer. Preferably, as is described on page 6, lines 8-10, the nonwoven mat is made from polyester, although it could also be made from glass, basalt, olefin, or any other suitable materials that meet the requirements set forth. As paper was described as being incapable of meeting the desired requirements (fire resistance, strength when wet, and cohesion of the composite when wet), it is Applicants' contention that paper would not fall within the scope of the preferred materials.

USPTO Customer No. 25280

Case 5072

Likewise, the reinforcing scrim fabric material is preferably made from continuous glass fibers, although other materials (including polyesters, polyolefins, polyamides, basalt or other mineral fibers, carbon fibers, cotton, or rayon) may also be used. See page 6, lines 19 et seq. In terms of properties, "the reinforcing scrim fabric material should be strong enough to survive the rigors of board manufacture, and should be open enough to allow gypsum to flow through" (page 6, lines 16-18). Page 7, lines 9 et seq., describes the use of yarn size and yarn density to adjust the strength of the reinforcing scrim fabric.

Paper does not meet the desired requirements of fire resistance, strength when wet, and cohesion of the composite when wet. Paper does not have yarns whose size or density can be adjusted. MPEP 2163.02 states "the subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement." Applicants, therefore, believe that they have shown sufficient evidence that the use of the term "paperless" is supported, although that word *per se* is not included in the written description. Accordingly, Applicants request that new Claim 52 be allowed as submitted.

Rejection of Claims 18-23 and 27-30 under 35 USC §103(a)

Claims 18-23 and 27-30 are rejected under 35 USC 103(a) as being unpatentable over Dierks et al. (US Patent 3,944,698) in view of Cooper et al. (US Patent Application 2001/0019181).

The Dierks reference teaches the use of glass fibers incorporated with a gypsum material to create a wallboard that is positioned between two paper sheets. Cooper

USPTO Customer No. 25280

Case 5072

describes a cementitious board with a reinforcement fabric (woven, nonwoven, or scrim) that is embedded into the cementitious material on one or opposite sides.

The Examiner maintains his position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the nonwoven fabric material of Cooper in the cementitious material of Dierks motivated with the expectation that the material composite would exhibit improved strength as noted in Dierks.

However, Dierks does not teach the use of separate reinforcing and nonwoven layers. The Examiner contends that the fibers correspond to both Applicants' reinforcing layer and Applicants' nonwoven mat. Applicants respectfully disagree. On page 8 of the specification of the present disclosure (lines 1-3), Applicants identify one reason for using separate reinforcing and nonwoven layers: "As a board is flexed, the yarn [of the reinforcing scrim fabric] presses against the nonwoven mat and the load is then transferred to a larger area of the core, thus providing additional strength." No such construction or rationale is provided by Dierks.

Cooper teaches the use of a woven knit, a nonwoven, or a laid scrim open mesh fabric to reinforce a cementitious board. However, Cooper does not overcome the primary shortcoming of the Dierks reference, that being the failure to teach the use of both a nonwoven mat and a reinforcing fabric that are bonded together. Accordingly, because the combination of Dierks and Cooper fails to teach all of the limitations of the claims, Applicants respectfully submit that the outstanding obviousness rejection should not be maintained.

USPTO Customer No. 25280

Case 5072

Rejection of Claims 18-22, 24, 25, and 27-34 under 35 USC §103(a)

Claims 18-22, 24, 25, and 27-34 are rejected under 35 USC §103(a) as being unpatentable over Pilgrim (US Patent 4,378,405) in view of Newman et al. (US Patent 6,054,205). The Examiner maintains his position that it would have been obvious to one of skill in the art at the time the invention was made to employ the adhesive of Newman with the fabric of Pilgrim with the expectation that the improved bonding of the fabric layer would result in improved dimensional stability of the material web as noted in Newman.

Pilgrim describes the use of a nonwoven glass fiber tissue layer embedded in the wallboard core via vibration. Pilgrim does not disclose the use of both a carded nonwoven mat and a reinforcing fabric that are bonded together, as required by Claim 18. The Examiner suggests that Newman teaches the use of an adhesive to bond the scrim to the cementitious layer. Applicants respectfully note that Newman teaches the use of adhesive polymers as the melt blown polymer web, as opposed to a separate adhesive layer as contemplated by Applicants. Applicants have amended Claim 23 to specify a separate adhesive layer positioned between the nonwoven mat and the fabric layer.

Because the combination of Pilgrim and Newman fails to teach all of the limitations of the claims, Applicants respectfully submit that the outstanding obviousness rejection has been traversed and should be withdrawn.

USPTO Customer No. 25280

Case 5072

**CONCLUSION**

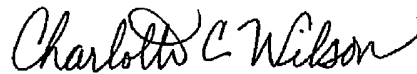
For the reasons set forth above, it is respectfully submitted that all claims stand in condition for allowance.

Should any issues remain after consideration of these Remarks, the Examiner is invited and encouraged to telephone the undersigned in the hope that any such issue may be promptly and satisfactorily resolved.

A Petition for Extension of Time (two months) accompanies this paper. In the event that there are additional fees associated with the submission of these papers (including extension of time fees), authorization is hereby provided to withdraw such fees from Deposit Account No. 04-0500.

Legal Department  
MILLIKEN & COMPANY  
920 Milliken Road, M-495  
Spartanburg, SC 29303

Respectfully submitted,



Charlotte C. Wilson  
Agent for Applicants  
Registration No. 45,224  
Tel. (864) 503-2194